



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/542,973

04/04/2000

Mathew O. Anderson

LIT-PI-499

5656

7590

05/17/2004

W Gary Goodson
Bechtel BWXT Idaho LLC
P O Box 1625
Idaho Falls, ID 83415-3899

EXAMINER

PIZIALI, JEFFREY J

ART UNIT

PAPER NUMBER

2673

20

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/542,973

Applicant(s)

ANDERSON ET AL.

Examiner

Jeff Piziali

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 24-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 24-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 22 March 2004 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-16 and 24-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Amended independent claims 1, 9, and 24 (see Paper No. 17, filed 22 March 2004) each respectively, newly recite the limitations of "an input conversion module configured to convert the raw data into a zone structure representative of the operator commands in a *telepresence-device independent format*, the zone structure being a *format independent of any one of the one*

Art Unit: 2673

*or more input devices;" "converting the raw data into a zone structure, representative of the movement commands in a **telepresence-device independent format**, the zone structure being a **format independent of any one of the input devices and any one of the one or more telepresence devices**;" and "an input conversion module configured to receive raw data representative of operator commands from at least one of the plurality of input devices and further configured to convert the raw data to a zone structure representative of the operator commands in a **telepresence-device independent format**, the zone structure being a **format independent of any of the plurality of input devices and any of the plurality of telepresence devices**" (emphasis added). Although the specification describes conversion of raw data into a zone structure (see page 13, for instance), the subject matter of "telepresence-device independent formats" has not been described in the pending specification. In fact, prior to the amendment filed 24 September 2004 (Paper No. 15), all three independent claims recited the limitation of operator/movement commands being in a **common** format. Such differing format types would appear to be at odds with each other.*

Claims 2-8, 10-16, and 25-37 are further rejected under 35 U.S.C. 112, first paragraph, due to their respective dependencies upon rejected base claims 1, 9, and 24 (see above paragraph).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2673

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6-16, 24-34, 36, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Diner et al. (US 5,182,641).

Regarding claim 1, Diner discloses a telepresence system for allowing an operator [Fig. 1, 19] to interact with a remote operating environment, the system comprising: one or more input devices [Fig. 1, 21], the one or more input devices configured to produce raw data representative of operator commands; an input conversion module configured to convert the raw data into a zone structure representative of the operator commands in a telepresence-device independent format, the zone structure being a format independent of any one of the one or more input devices; one or more device modules corresponding to one or more telepresence devices [Fig. 1, 13'-17'], the one or more device modules for converting the zone structure into telepresence device commands specific to an associated one of the one or more telepresence devices, the zone structure being a format independent of any of the one or more telepresence devices, the telepresence device commands resulting from at least a portion of the operator commands; and a configuration module for associating a specific one of the one or more input devices corresponding to the zone structure with a specific one of the one or more telepresence devices which responds to the telepresence device commands resulting from the zone structure (see Column 4, Line 15 - Column 5, Line 37).

Regarding claim 2, Diner discloses one or more of a headset, keyboard, mouse, and joystick (see Column 4, Line 53 - Column 5, Line 2).

Art Unit: 2673

Regarding claim 3, Diner discloses only one of the input devices is permitted to produce raw data at a time (see Column 5, Lines 13-24).

Regarding claim 4, Diner discloses one input device is capable of controlling plural telepresence devices (see Column 4, Line 53 - Column 5, Line 2).

Regarding claim 6, Diner discloses one or more of a stereo camera set, a zoom camera, a pan and tilt device, a slider bar, and a robot (see Column 9, Line 40 - Column 10, Line 8).

Regarding claim 7, Diner discloses the pan and tilt device is connected to the stereo camera set, and is capable of orienting it (see Column 9, Line 40 - Column 10, Line 8).

Regarding claim 8, Diner discloses the pan and tilt device is connected to the zoom camera, and is capable of orienting it (see Column 9, Line 40 - Column 10, Line 8).

Regarding claim 9, this claim is rejected by the reasoning applied in the above rejection of claim 1, furthermore Diner discloses receiving raw data representative of movement commands from the selected input device; converting the raw data into a zone structure, representative of the movement commands in a telepresence-device independent format; the zone structure being a format independent of any one of the input devices and any one of the one or more telepresence devices; when the selected input device is selectively associated with the one or more associated telepresence devices, processing the zone structure with a device module

Art Unit: 2673

corresponding to each of the one or more associated telepresence devices to obtain telepresence device commands corresponding to at least a portion of the movement commands for each of the associated telepresence devices; and transmitting the movement commands to the associated telepresence devices (see Column 4, Line 15 - Column 5, Line 37).

Regarding claim 10, this claim is rejected by the reasoning applied in the above rejection of claim 2.

Regarding claim 11, this claim is rejected by the reasoning applied in the above rejection of claim 1.

Regarding claim 12, Diner discloses representing speeds and directions (see Column 4, Line 15 - Column 5, Line 37).

Regarding claim 13, Diner discloses the associated telepresence devices only respond to portions of the zone structure that correspond to the axes of the associated telepresence devices (see Column 4, Lines 41-52).

Regarding claim 14, this claim is rejected by the reasoning applied in the above rejection of claim 1.

Art Unit: 2673

Regarding claim 15, Diner discloses executing the movement commands by the associated telepresence devices (see Column 4, Line 41 - Column 5, Line 24).

Regarding claim 16, Diner discloses computer executable instructions (see Column 4, Line 41 - Column 5, Line 24).

Regarding claim 24, this claim is rejected by the reasoning applied in the above rejection of claims 1 and 9; furthermore, Diner discloses one or more of the telepresence devices provide a visual representation [Fig. 1, 27-30] of the operating environment; an input conversion module configured to receive raw data representative of operator commands from at least one of the plurality of input devices and further configured to convert the raw data to a zone structure representative of the operator commands in a telepresence-device independent format, the zone structure being a format independent of any of the plurality of input devices and any of the plurality of telepresence devices; and a communication link [i.e. cables and busses] for transmitting the movement commands to the telepresence devices (see Column 4, Line 15 - Column 5, Line 37).

Regarding claim 25, this claim is rejected by the reasoning applied in the above rejection of claim 6-8.

Regarding claim 26, Diner discloses providing stereo vision (see Column 7, Lines 32-44).

Art Unit: 2673

Regarding claim 27, this claim is rejected by the reasoning applied in the above rejection of claims 9 and 12.

Regarding claim 28, this claim is rejected by the reasoning applied in the above rejection of claim 4.

Regarding claim 29, Diner discloses a configuration module [Fig. 1, 18] (see Column 4, Line 53 - Column 5, Line 24).

Regarding claim 30, Diner discloses one or more views, wherein each view defines the telepresence devices controlled by a single input device (see Column 5, Line 25 - Column 6, Line 16).

Regarding claim 31, Diner discloses selecting a different view (see Column 5, Lines 25-37).

Regarding claim 32, this claim is rejected by the reasoning applied in the above rejection of claim 4.

Regarding claim 33, this claim is rejected by the reasoning applied in the above rejection of claim 1.

Regarding claim 34, Diner discloses providing depth perception (see Column 1, Lines 31-41).

Regarding claim 36, Diner discloses controlling the telepresence devices without the use of the operator's hands (see Column 4, Line 53 - Column 5, Line 2).

Regarding claim 37, Diner discloses a communication link [i.e. cables and busses], wherein the telepresence device commands are received by the one or more telepresence devices over a communication link such that the one or more input devices are configured to control the one or more telepresence devices, wherein the telepresence devices provide the operator with one or more visual representations [Fig. 1, 27-30] of the operating environment (see Column 4, Line 15 - Column 5, Line 37).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diner et al. (US 5,182,641).

Art Unit: 2673

Regarding claim 5, Diner does not expressly disclose a wireless communications link. However, the substitution of cable communication links with wireless ones was well known and commonly understood at the time of invention, in the art of data transmission/reception. Therefore, it would have been obvious to one skilled in the art at the time of invention to use wireless communication links in place of Diner's cables (see Column 5, Lines 9-11), so as to alleviate the clutter of wires.

Regarding claim 35, this claim is rejected by the reasoning applied in the above rejection of claim 5.

Response to Arguments

8. Applicants' arguments filed 22 March 2004 have been fully considered but they are not persuasive. Pertaining to the claim rejections under 35 U.S.C. 112, first paragraph, the applicants argue the instant "specification is replete with references to an independent-natured zone structure" (see Page 9 of the Amendment). However, the examiner respectfully disagrees. For all the excerpted specification subject matter provided by the applicants (see Pages 9-10 of the Amendment), no mention is ever made anywhere within the pending specification to an "independent-natured zone structure." The applicants extrapolate from their provided excerpts that there is "ample disclosure relating to the use of an *intermediate zone structure* that allows for conversion of the zone structure to commands that can cause interoperability with a myriad of telepresence devices" (emphasis added -- see Page 10 of the Amendment). However, this so-called "*intermediate zone structure*" is another matter entirely. Pending claim language says

Art Unit: 2673

nothing of "*intermediate* zone structures." Furthermore, even if the instant specification arguably does disclose an "*intermediate* zone structure," it does not logically follow that the specification teaches an "*independent* zone structure." There exists no description in the instant specification of what is meant by an "independent-natured zone structure." Therefore, the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Moreover, the applicants contend the cited prior art of Diner et al. (US 5,182,641) neglects to teach an input conversion module configured to convert the raw data into a zone structure representative of the operator commands in a telepresence-device independent format, the zone structure being a format independent of any one of the one or more input devices. However, the examiner again respectfully disagrees. Diner explicitly discloses, "hand-controller coordinates [i.e. raw data] are transformed [i.e. converted to an intermediate telepresence-device/input-device independent format] to correspond with [i.e. to be adapted/converted to] the coordinates of a selected camera [i.e. telepresence device commands]" (see Column 2, Lines 40-41). The applicants continue, "Diner does not disclose any intermediate telepresence-device independent format but rather discloses a direct scaling of coordinates commensurate with the corresponding field of view (e.g. zoom magnitude) of the selected camera" (see Page 13 of the Amendment). However, Diner's hand-controller coordinates are transformed/converted so as to control up to four cameras, as the applicants themselves note (see Page 13 of the Amendment; Column 2, Lines 40-42 and Column 5, Lines 35-37 of Diner). Therefore, even if Diner only arguably teaches a coordinate method of "direct scaling" (as the applicants contend), such scaling

Art Unit: 2673

inherently must function as an "intermediate format" because such scaled coordinates are operable with a plurality of separate telepresence devices. By such reasoning, rejection of the claims is deemed proper, necessary, and thereby maintained at this time.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (703) 305-8382. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J.P.

14 May 2004



BIPIN SHALWALA
SUPERVISOR, PATENT EXAMINER
2600